WHAT IS CLAIMED IS:

1. A method for forming a fully integrated thermal inkjet printhead, comprising the steps of:

applying a thin film structure to a substrate;

etching a plurality of openings through the thin film structure into the substrate;

applying an orifice layer to the thin film structure at a surface of the thin film structure opposite the substrate, wherein the openings are filled with orifice layer material;

forming a nozzle chamber in the orifice layer, wherein at least a portion of the orifice layer material which filled at least one of the plurality of the openings remains;

etching the substrate at a surface of the substrate opposite the thin film structure, wherein the orifice layer material which remains after forming the nozzle chamber is uncovered to form a plurality of pillars, and wherein the step of etching the substrate occurs after the thin film structure is applied to the substrate.

2. The method of claim 1, wherein the step of etching the substrate comprises the step of etching a trench into the substrate at the substrate surface opposite the thin film structure, and wherein the plurality of pillars formed are located within the trench.

3. The method of claim 2, further comprising the steps of:

flowing ink into the trench and through the inlet opening into the nozzle chamber to refill a nozzle chamber.

4. The method of claim 3, further comprising the step of:

blocking, with at least one of the plurality of pillars, a particle carried by the ink, wherein the particle is kept away from the inlet opening allowing ink to flow into the nozzle chamber.

5. The method of claim 1, in which the step of etching a plurality of openings, comprises the steps of etching an inlet opening through the thin film structure, and etching a plurality of pillar openings into the substrate;

wherein said at least one of the plurality of openings having orifice layer material remaining after the step of forming the nozzle chamber comprises the pillar openings.

6. The method of claim 5, in which the step of etching an inlet opening comprises etching an inlet opening through the thin film structure into the substrate, and in which the step of etching the substrate comprises etching a trench less than all the way through the substrate exposing the inlet opening.

7. The method of claim 5, in which the steps of etching an inlet opening through the thin film structure and etching a plurality of pillar openings into the substrate are performed concurrently.

8. The method of claim 5, in which the step of etching a plurality of pillar openings into the substrate, comprises etching a pillar opening into the substrate in an area within the inlet opening.

9. The method of claim 1, in which the step of forming the nozzle chamber comprises, removing a first portion of the orifice layer material within each one of at least two of the plurality of openings in the orifice layer, while leaving a second portion of the orifice layer material within each of said at least two openings; and

wherein the step of etching the substrate comprises uncovering the second portion of the orifice layer material to form the plurality of pillars.

10. A method for forming a fully integrated thermal inkjet printhead, comprising the steps of:

applying a thin film structure to a first surface of a substrate;

etching a trench into a second surface of the substrate opposite the first surface;

applying photoimageable material within the trench;

removing a portion of the photoimageable material leaving a plurality of pillars protruding within the trench;

applying an orifice layer to the thin film structure opposite the substrate;

forming a nozzle chamber within the orifice layer; and

forming an inlet opening which extends from the nozzle chamber through the thin film structure.

11. The method of claim 10, in which the steps of applying the orifice layer, forming the nozzle chamber and forming the inlet opening occur prior to the steps of etching a trench, applying photoimageable material and removing the portion of the photoimageable material.

12. The method of claim 10, in which the steps of applying the orifice layer, forming the nozzle chamber and forming the inlet opening occur prior to the steps of applying photoimageable material and removing the portion of the photoimageable material.

13. The method of claim 10, in which the steps of applying the orifice layer, forming the nozzle chamber and forming the inlet opening occur prior to the step of removing the portion of the photoimageable material.

14. The method of claim 10, in which the step of removing the portion of photoimageable material occurs before the step of applying the orifice layer to the thin film structure opposite the substrate.

15. The method of claim 10, in which the step of removing the portion of photoimageable material occurs before the step of forming the nozzle chamber within the orifice layer.

16. The method of claim 10, in which the step of removing the portion of photoimageable material occurs before the step of forming the inlet opening.

17. The method of claim 10, in which the step of etching the trench into the second surface of the substrate comprises etching a trench through the substrate to the thin film structure, and in which the step of applying photoimageable material comprises applying photoimageable material within the trench to the thin film structure.

18. The method of claim 10, in which the step of etching the trench into the second surface of the substrate comprises etching a trench less than all the way through the substrate, and in which the step of applying photoimageable material comprises applying photoimageable material within the trench to an exposed portion of the substrate.

19. The method of claim 10, further comprising the steps of:

flowing ink into the trench and through the inlet opening into the nozzle chamber to refill a nozzle chamber.

20. The method of claim 19, further comprising the step of:

blocking, with at least one of the plurality of pillars, a particle carried by the ink, wherein the particle is kept away from the inlet opening allowing ink to flow into the nozzle chamber.

21. The method of claim 10, in which the step of forming an inlet opening comprising forming a plurality of inlet openings, and wherein at least two of the plurality of inlet openings occur within the nozzle chamber.

22. A method for forming a fully integrated thermal inkjet printhead, comprising the steps of:

etching a plurality of pillar openings into a first surface of a substrate;

depositing an etchant-resistant material into the pillar openings;

applying a thin film structure to the first surface of the substrate;

etching an inlet opening through the thin film structure;

applying an orifice layer to the thin film structure at a surface of the thin film structure opposite the substrate;

forming a nozzle chamber in the orifice layer, wherein the inlet opening occurs within the nozzle chamber; and

etching the substrate at a second surface of the substrate opposite the first surface, wherein the etchant-resistant material filling in the plurality of pillar openings is exposed and form a plurality of pillars, and wherein the step of etching the substrate at the second surface occurs after the thin film structure is applied to the substrate.

23. The method of claim 22, in which the step of etching an inlet opening comprises etching an inlet opening through the thin film structure into the substrate, and in which the step of etching the substrate at the second surface comprises etching a trench less than all the way through the substrate exposing the inlet opening.